



Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Lewistown Lake

Waterbody Segment at a Glance:

| | |
|----------------------------|--------------------------------|
| County: | Lewis |
| Nearby Cities: | Lewistown |
| Area of impairment: | 27 acres |
| Pollutant 1: | Atrazine |
| Source: | Corn and Sorghum Production |
| Pollutant 2: | Cyanazine |
| Source 2: | Corn and Sorghum Production |



Proposed for addition to 2002 303(d) List

TMDL Priority Ranking: N/A

Description of the Problem

Beneficial uses of Lewistown Lake:

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life and Human Health associated with Fish Consumption
- Boating and Canoeing
- Drinking Water Supply

Use that is impaired

- Drinking Water Supply

Standards that apply

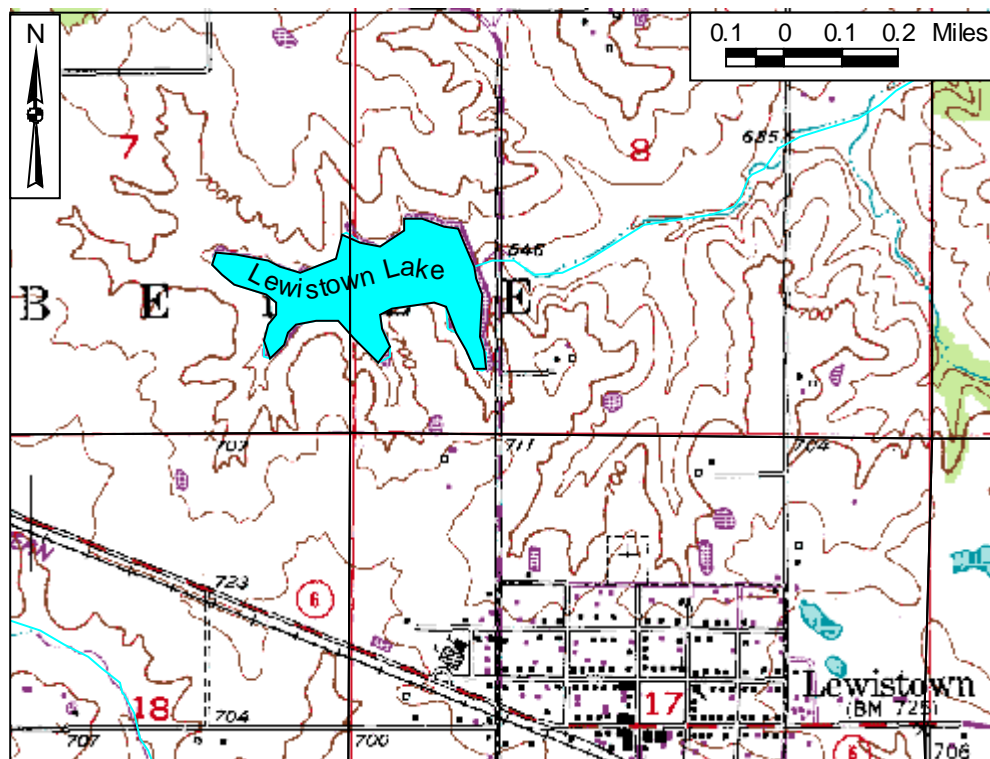
- The impairment of this lake is based on exceedence of the specific criterion of 3 µg/L (micrograms per liter or parts per billion) atrazine, as an average of the period of record, contained in Missouri's Water Quality Standards 10 CSR 20-7.031, Table A.
- The cyanazine impairment based on the Federal Health Advisory Level is 1µg/L (micrograms per Liter).

The Lewistown Reservoir is 27 acres in size and is the sole public water supply for the 500 customers it serves. Runoff from corn and sorghum production areas in the watershed has resulted in measurable amounts of atrazine and cyanazine within the lake. Atrazine is a widely used herbicide for control of broadleaf weeds. It is the most heavily used herbicide on corn and grain sorghum in Missouri. Atrazine is considered a possible human carcinogen, so the state standard

for allowable amounts in drinking water supply source waters is set at the very low level of three micrograms per liter ($\mu\text{g/L}$) or parts per billion. Only nine raw water atrazine measurements have been made on Lewistown Lake, and these were taken in the early 1990s. The average atrazine level from these nine samples is $5.00 \mu\text{g/L}$. Considerable analysis of finished drinking water in the past few years shows little or no atrazine. The Department of Natural Resources will start raw water monitoring of Lewistown Lake in 2001.

Cyanazine is a chemical similar to atrazine and was used on corn and sorghum to control broadleaf weeds and grasses. It was banned from production after December 31, 1999. Cyanazine is relatively persistent in the environment and under certain conditions will remain at significant levels in surface water for over one year. The U.S. Environmental Protection Agency has classified cyanazine as a possible cancer-causing agent in humans. The Federal Health Advisory Level for cyanazine is $1 \mu\text{g/L}$.

Map of Lewistown Lake, Lewis County



Atrazine Concentrations in Raw Water from Lewistown Lake (µg/L)

| | |
|-----------------|------|
| March, 1991 | 1.1 |
| June, 1991 | 8.4 |
| June, 1991 | 19 |
| November, 1991 | 6.6 |
| June, 1992 | 3.1 |
| September, 1992 | 3.7 |
| December, 1992 | 1.2 |
| March, 1993 | 1.2 |
| June, 1993 | 0.77 |

Source: University of Missouri - Columbia

For more information call or write:

Missouri Department of Natural Resources, Water Pollution Control Program
P.O. Box 176, Jefferson City, MO 65102-0176
1-800-361-4827 or (573) 751-1300 office, or (573) 751-9396 fax
Program Home Page: www.dnr.state.mo.us/deq/wpcp